

REMARKS/ARGUMENTS

Claims 1-11, 13-26, 28-38, 40, and 42-50 remain in the application for further prosecution. Claims 42, 43, 45 and 46 have been amended. The Applicants thank the Examiner for allowance of claims 47-50.

Claim Objections

Claims 42, 43, 45 and 46 have been amended to depend from claims 47-50 and should now be in condition for allowance.

§ 103 Rejections

Independent claims 1 and 28 are directed to a system for determining whether arcing is present in an electrical circuit. Independent claim 16 is directed to a method for determining whether arcing is present in an electrical circuit. All three claims include the limitation that the system is contained on a single application specific integrated circuit chip.

To render the claimed invention obvious, the Examiner “must identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999), *abrogated on other grounds by In re Gartside*, 203 F.3d 1305, 53 U.S.P.Q.2d 1769 (Fed. Cir. 2000) (*quoting In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453, 1459 (Fed. Cir. 1998)). The prior art must be considered in its entirety, including any portions that may teach away from the claimed invention. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983).

U.S. Patent No. 6,259,996 to Haun et al. (“Haun”) discloses an arc fault detector system. The arc fault detector system includes a microcontroller 40 and an ASIC 30 that includes the

fault detection circuitry. As acknowledged by the Examiner, Haun does not disclose combining the microcontroller 40 and the detection circuitry on the ASIC.

U.S. Patent No. 4,589,052 to Dougherty ("Dougherty") does not address the deficiencies of Haun. Dougherty discloses a digital trip unit for static trip circuit breakers implemented within a single integrated circuit chip. The Office Action contends that Dougherty suggests the combination of Haun and Dougherty by stating that "[f]rom a cost standpoint, it would be highly desirable to incorporate the entire static trip unit circuit within a single chip . . ." Dougherty, column 1, lines 42-45. Dougherty then proceeds to say, however, that "[t]his combination of analogue and digital circuit elements is not readily implemented within a single integrated circuit." *Id.* at column 1, lines 53-55. Thus, Dougherty is effectively teaching away from the combination of the elements on a single integrated circuit, saying that it is not feasible.

Thus, it would not have been obvious to one skilled in the art to modify the analyzing circuit of Haun with Dougherty to reach the invention as recited in independent claims 1, 16 and 28 because Dougherty taught away from such a combination. For this reason, independent claims 1, 16 and 28 should be deemed allowable over Haun and Dougherty.

Claims 2, 3, 5-7, 10, 11, 17, 18, 20-23, 25, 26, 29, 30, 32-35, 37 and 38 are all dependent on independent claims 1, 16 and 28 and are, therefore, also believed to be allowable.

Dependent Claims 4, 8, 9, 13-15, 19, 24, 31, 36, 40 and 42-46

The Office Action applied further references against some of the dependent claims -- U.S. Patent No. 4,792,899 to Miller ("Miller"), U.S. Patent No. 5,774,555 to Lee et al. ("Lee"), U.S. Patent No. 6,054,887 to Horie et al. ("Horie"), U.S. Patent No. 5,784,020 to Inoue ("Inoue"), U.S. Patent No. 5,224,006 to MacKenzie et al. ("MacKenzie"), and U.S. Patent No. 6,185,732 to

Mann et al. ("Mann"). None of these references address teaching away from the combination of Dougherty and Haun that is discussed above. Thus, claims 4, 8, 9, 13-15, 19, 24, 31, 36, 40 and 42-46, which depend either directly or indirectly on independent claims 1, 16 or 28, are not obvious over Haun, Dougherty, Miller, Lee, Horie, Inoue, MacKenzie, Mann, or combinations thereof for at least the same reasons and, thus, should be allowable.

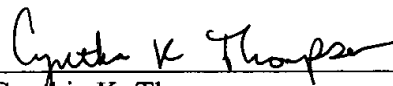
Conclusion

It is the Applicants' belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested.

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated.

Respectfully submitted,

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